Agenda

- **Background** – Safety & Environmental Management System (SEMS)
- **SEMS Objectives**, and concerns that have been raised on ability to reach them
- **Continual Improvement Possibilities**
  - Hazards Analysis and Risk Management
  - Contractor Coverage
  - Human Factors
  - Performance Indicators
  - SEMS Auditing
Development of SEMS

- **Triggers**
  - Process Safety Incidents
  - Development of safety management systems

- **Initially a Voluntary Standard**
  - API Recommended Practice for a Safety and Environmental Management Program (RP75)
    - 1991 First Edition
Development of SEMS

- Eventually adopted as Regulation

- 2009 June NPRM from MMS (BSEE predecessor)

- 2010 April
  - Deepwater Horizon Incident
  - President directs DOI to recommend safety improvements

- 2010 May: DOI recommends management system mandate

- 2010 Oct.: DOI publishes SEMS I regulation
  - Adopts RP 75 framework
SEMS Continual Improvement

- 2011 Sept: SEMS II NPRM issued
- 2013 April: SEMS II Final Rule issued
- 2014 June: Compliance with most of SEMS II is required
- 2015 June: Compliance with Auditing requirements of SEMS II is required
Goals of the SEMS Regulation and of BSEE’s approach to it

- Comprehensive development and implementation by industry of a management system that identifies and mitigates risk in all operations on an OCS facility
- Commitment to continual improvement in industrial practices so that incident rates and severity are reduced
- Improvement in BSEE regulations, enforcement approaches, and/or guidance so that:
  - Use of the management system approach is embraced
  - Successes are recognized
  - Tendency to fall back into less disciplined approaches is reduced
Continual Improvement Possibilities, going forward

- Recommendations from the Chemical Safety and Hazard Investigation Board (CSB), the Ocean Energy Safety Advisory Committee (OESAC), and Transportation Research Board of the National Academies (TRB)
  - Increase focus on process safety issues
  - Specifically target safety critical equipment (SCE) design and maintenance
  - Adequately mitigate risks to an acceptable level
- Results from BSEE review of 1st round SEMS audit reports, BSEE sponsored research (ABSG), and recent OCS incidents
  - Need to focus operators on SEMS effectiveness
  - Need to improve identification of hazard sources
  - Reduce confusion on contractor responsibilities
  - Incorporate KPIs and other Human Factor considerations
Acceptability Criteria for Risk
Adequacy of Risk Management Plans
Adoption of multiple Safety Barrier approach
Ensure functionality of Safety Critical Equipment
USCG: Cyber Security

- How is BSEE managing risks associated with software incompatibility, general malware, intentional hacking, and all things in-between
- Is there a place in SEMS for cyber risk management
- What would it look like
- How is industry currently addressing the risks associated with cyber security offshore
ABSG, et al.: Expand Human Factor Considerations in SEMS

- Delineate in more effective terms Contractor Responsibilities within SEMS
- Acknowledge as a leadership responsibility, the motivational elements (or disincentives) for specific behaviors within the management system
- Use of Key Performance Indicators (KPIs) as another driving force that can also measure effectiveness of the SEMS elements
CSB, BSEE Research: Expand Coverage, Utility of SEMS Audits

- Adequacy of SEMS Auditing Frequency
- Adequacy of Facility Sampling Requirements
- Tools to ensure a SEMS is functioning prior to issuing permits for new operators
- Ways to share learnings from the audit reports to improve the SEMS of other operators
- Standardization of report formats, finding levels, and analysis of SEMS effectiveness / maturity
- Better BSEE follow-up on Corrective Action Plans (CAPs)
ABSG, et al: Identify effective ways to achieve Continual Improvement

- New regulations
- New industry standards
- New enforcement strategies
- New guidance from BSEE
- Focused approaches geared towards smaller operators
- Other approaches
The OESI Forum

- Timely dialogue on issues facing the industry
- Discuss room for improvement

Why OESI
- Core mission: foster dialogue among a variety of stakeholders
- Unique, professional viewpoints
- Ability to objectively summarize input from diverse points of view
API RP 75 and COS

- Relationship of this Forum to other SEMS improvement activities currently underway
- Opportunity to inform stakeholders:
  1. What the activities are
  2. Where they are heading
  3. How long will they take